

## ABSTRACT

The present invention relates to a method for preparing a thin film of metal oxide containing one or more metal elements on a substrate. The method includes the steps of applying a sol-gel solution containing the one or more metal elements to a surface of the substrate, drying the sol-gel solution to prepare a dried gel film on the substrate, soaking the dried gel film on the substrate in an alkaline aqueous solution containing at least one kind of metal element among the one or more metal elements in a container, sealing the container, and performing hydrothermal treatment for the dried gel film on the substrate in the sealed container to prepare a thin film of metal oxide on the substrate.